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To: [Burt Shephard/R10/USEPA/US@EPA](#)
Cc: [Eric Blischke/R10/USEPA/US@EPA](#); [Jennifer Peers](#)
Subject: Re: Response to February 18, 2010 Letter on Portland Harbor Preliminary Risk Assessment Comments
Date: 03/23/2010 09:30 AM

Burt,

Thank you for your clear response on this issue. I agree with you that this issue only serves to delay this process further and needs to be addressed immediately. I am curious about the other site in Alabama where EPA recommended taking the RI/FS out of the hands of the PRPs in response to similar attempts to limit (or do away with listing) COCs in the RI. What site is that?

erin

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On Mar 22, 2010, at 4:12 PM, Shephard.Burt@epamail.epa.gov wrote:

Eric,

Regarding LWG's objections to EPA's position on chemicals of concern, I know you've been supportive of what I'm about to say. But I want to make the point that LWG's trying to define a difference between "chemical of concern" and "unacceptable risk" is an issue that has become bigger than Portland Harbor. To summarize, the LWG proposes deleting any reference to chemicals of concern (COCs) for any chemical that was identified as posing risk in the risk assessment. Instead, the LWG proposes stating that any chemical shown to pose risk be carried into the FS. At least in the baseline ecological risk assessment (BERA), LWG's definition of chemicals posing unacceptable risk is a subset of the identified COCs, an approach we described as unacceptable to EPA in our preliminary written comments on the draft BERA. Our

definition of the term chemical of concern in our preliminary comments is all chemicals with a hazard quotient greater than or equal to 1.0, consistent with our direction to LWG in the problem formulation for the BERA. Despite LWG's complaints, our usage of the term COC is fully consistent with EPA CERCLA guidance and historical usage of the term. While I suspect you are correct that this effort to distinguish between COC and risk is an attempt by LWG attorneys at parsing words, I don't fully agree with you that EPA guidance is not clear on the definition of chemicals of potential concern (COPC's) and chemicals of concern (COC's). I'm aware of at least two areas within EPA's CERCLA guidance where COC's and their use are clearly defined, which I'll list below.

This issue of trying to reduce the COC list by concluding that not all COCs pose unacceptable risk in baseline risk assessments has recently been tried by PRP groups and their contractors in other EPA regions, as well as at Portland Harbor. In EPA Region 4, this approach drew a recommendation from EPA staff that the RI report be taken away from the PRP group at a large Superfund site in Alabama. In EPA Region 2, attempts by contractors for a PRP group to claim identified COCs do not pose unacceptable human health risk at a site in New Jersey drew a public rebuttal from Walter Mugdan, the head of the Superfund program in EPA Region 2, and a former regional counsel for Region 2. Mugdan's rebuttal, the risk assessment which drew his rebuttal, and the contractor's response to Mugdan, which ignored Mugdan's point about hazard indices greater than 1.0 defining unacceptable risk are all attached. The link to all three articles, which I've attached for those who can access the journal Science of the Total Environment, is below:

<http://www.sciencedirect.com/science/issue/5836-2010-995919993-1623094>

This issue of PRP groups and their contractors trying to take over EPA authority under CERCLA to define chemicals of concern posing unacceptable risks to human health or the environment appears to be becoming more common, and is larger than a Portland Harbor specific issue. It's an approach that I believe should be stopped sooner rather than later. I further believe that the message should come from a very high level within EPA, above the level of an individual remedial project manager for a particular site.

So can someone, preferably someone very high within the region (ECL, regional counsel, or RA's office) please explicitly point out to LWG the definition of a chemical of concern. Two places to start are the following:

EPA's Superfund Information Systems website that defines and describes chemicals of concern for literally hundreds of Superfund sites, including a definition in its glossary for contaminant of concern (admittedly the site jumps back and forth between the terms chemicals of concern and contaminants of concern), and Chapter 6 of the EPA A Guide to Preparing Superfund Proposed Plans,

Records of Decision, and Other Remedy Selection Decision Documents (EPA 540-R-98-031, July 1999), which also gives a definition of chemical of concern, and is much more consistent in its use of the term chemical of concern (although contaminant of concern still sneaks in occasionally)

The language on the Superfund information systems website for sites that are far enough along to have contaminants of concern described (Portland Harbor isn't that far yet) is as follows: "The chemical substances (i.e., hazardous substances, pollutants, or contaminants) listed below were identified as contaminants of concern (COC) for the site. COCs are the chemical substances found at the site that the EPA has determined pose an unacceptable risk to human health or the environment. These are the substances that are addressed by cleanup actions at the site. Identifying COCs is a process where the EPA identifies people and ecological resources that could be exposed to contamination found at the site, determines the amount and type of contaminants present, and identifies the possible negative human health or ecological effects that could result from contact with the contaminants."

The phrase to point out to LWG in the above is "COCs are the chemical substances found at the site that the EPA has determined pose an unacceptable risk to human health or the environment." LWG doesn't get to determine what a COC is at the conclusion of the risk assessment, EPA does. I'm sure that someone in the Regional Counsel's office can phrase this in the appropriate legalese so that LWG gets the message.

The ROD preparation guidance, page 6-10 defines chemicals of potential concern (COPCs) and chemicals of concern (COC) as follows: "Chemicals of Potential Concern (COPCs): Those chemicals that are identified as a potential threat to human health or the environment and are evaluated further in the baseline risk assessment. Chemicals of Concern (COCs): A subset of the COPCs that are identified in the RI/FS as needing to be addressed by the response action proposed in the ROD."

The ROD guidance further goes on to state "the ROD should primarily discuss the Chemicals of Concern (COCs) identified in the risk assessment that are driving the need for a remedial action, not necessarily all of the Chemicals of Potential Concern (COPCs) originally identified in the risk assessment process." Since some COPCs drop out during a baseline risk assessment, the COCs remaining at the end of the baseline risk assessments are those chemicals that are the basis for a remedial action. The basis for action is defined on page 6-13 of the ROD guidance, and states in part "chemical-specific standards or other measures that define acceptable risk levels are exceeded and exposure to contaminants above these acceptable levels is predicted for the RME".

Note that while all COCs form a basis for action, not all COCs may form a basis for the final remedy selected in the FS and documented in the

ROD, for a number of possible reasons. Maybe this is the point LWG is confusing. Note also that unlike human health risk assessment, the term "risk driver" is not used in EPA's ecological risk assessment guidance. Thus, there is no basis for shrinking the identified COC list in a baseline ecological risk assessment to a shorter list of chemicals posing unacceptable risk, as was done by LWG in Chapter 11 of the BERA.

So us ecorisk assessors are limited to forwarding to the FS our identified COCs. Pages 6-17 to 6-25 of the ROD guidance describe the recommended presentation of ecological risks in a ROD, including the identity of ecological COCs.

Also, within the February 15, 2008 BERA problem formulation document, BERA risk characterization section, page 48, LWG was directed as follows: "COPCs for which the HQ \geq 1.0 will be identified as chemicals of concern (COCs) in the BERA." By not listing, for example, identified COCs from the the bulk sediment quality guidelines and transition zone water lines of evidence in the BERA in their risk conclusions, LWG is out of compliance with EPA direction on performing the Portland Harbor BERA.

This Clintonian "what the meaning of is is" parsing of words on LWG's part needs to stop. This is particularly true if LWG really is concerned about the cost of the RI/FS and the schedule. It takes both time and money to respond to LWG arguments on terminology that was defined years ago, and is used without question or dispute at hundreds of Superfund sites around the country. Time and money that would be better spent on completing the RI/FS process so that we could undertake remediation of the Portland Harbor site, which is the goal of all of us working on the site.

Best regards,

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"If your experiment needs statistics to analyze the results, then you ought to have done a better experiment"

- Ernest Rutherford

(See attached file:
Urban-Passaic-River-Fish-Risk-Ass-STOTEN-408p209-2009.pdf)(See attached
file:

Mugdan-Comment-Urban-Passaic-River-Fish-Risk-Ass-STOTEN-408p209-2009.pdf)
(See attached file:
Urban-Response-To-Mugdan-Comment-Urban-Passaic-River-Fish-Risk-Ass-STOTEN-408p209-2009.pdf)

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Date: 03/16/2010 02:40 PM

Subject: Response to February 18, 2010 Letter on Preliminary Risk
Assessment Comments

As everyone should be aware, EPA submitted preliminary comments on the
draft baseline human health and ecological risk assessments on
December

23, 2009. After a series of meetings, EPA documented our proposed resolution of the comments in a letter dated February 9, 2010. On February 18, 2010, the LWG responded in writing to our letter. We have not yet prepared a response.

In their February 18, 2010 letter, the LWG identified two objections to our proposed resolution. Each objection and our proposed response is summarized below:

1) The LWG objects to the term COC for any chemical that was identified as posing risk in the risk assessment and proposes deleting any reference to COCs. Rather the LWG proposes stating that any chemical shown to pose risk be carried into the FS. The LWG's proposal applies to comments 2 (TZW), 4 (general comment on COCs), 5 (SQGs), 7 (inappropriate risk management decisions) and 8 (Table 11-2).

Although EPA guidance is not completely clear on this topic, RAGs Part B (Development of PRGs) states on page 16 under chemicals of concern: Following the baseline risk assessment, any chemical that has an associated cancer risk (current or future) within a medium of greater than 10^{-6} or an HI of greater than 1 should remain on the list of chemicals of potential concern for that medium." It is unclear to me whether EPA guidance distinguishes between COPCs and COCs.

Ultimately, this appears to be a semantic argument that was likely drafted by LWG attorneys. My recommendation is to quote the guidance and require that the chemicals posing risk be identified as COCs. The LWG themselves has identified all chemicals on Table 11-2 of the BERA (for example) as COCs.

2) The LWG objects to certain elements of our proposed resolution to Comment 10 as it relates to the consideration of near bottom surface water samples. The LWG agrees to screen near bottom samples against PRGs as part of the uncertainty analysis in the BHHRA. The LWG makes a distinction between regional screening levels (RSLs) and Region 6 tap water PRGs. I believe that our most recent direction on the use of screening values refers to them as regional screening levels rather than Region 6 PRGs. We will continue to refer to the PRGs as RSLs although it really should make no difference.

The LWG's objection seems to be with respect to consideration of RSLs in the evaluation of chemical mobility. They agree to look at MCLs but not RSLs. They state: "The LWG agrees to screen existing near-bottom surface water samples against SDWA MCLs in areas of contaminated groundwater discharge during the evaluation of remedial alternatives in the FS." Because we did not evaluate a groundwater drinking water scenario and because we are using integrated surface water samples in the risk assessment for the surface water drinking water scenario, this is primarily an ARARs issue rather than a risk assessment issue. As a result, I recommend that we agree to the LWG's proposed resolution.

Regarding the LWG's final point - FS vs. BRA - I think we are in agreement and will need to confirm this in writing.

I would like to discuss this topic at the next TCT meeting with the goal of reaching agreement on this approach. We will follow up formally in writing back to the LWG.

For ease of reference, I am attaching both our February 9, 2020 letter and the LWG's February 18, 2010 response.

Please let me know if you have any questions.

Thanks, Eric

[attachment "2010-02-18 LWG Response Letter to EPA Directive Clarifications on the Baseline Risk Assessments.pdf" deleted by Burt Shephard/R10/USEPA/US] [attachment "RevisedEPARiskAssesmentCommentResolution020910.doc" deleted by Burt Shephard/R10/USEPA/US] <Urban-Passaic-River-Fish-Risk-Ass-STOTEN-408p209-2009.pdf> <Mugdan-Comment-Urban-Passaic-River-Fish-Risk-Ass-STOTEN-408p209-2009.pdf> <Urban-Response-To-Mugdan-Comment-Urban-Passaic-River-Fish-Risk-Ass-STOTEN -408p209-2009.pdf>